

WHAT IS CLAIMED IS:

1. A voice control system that recognizes a speech uttered by a user to thereby control a device that has a plurality of operating states, comprising:

a storing unit for storing speech recognition data including a plurality of reference commands;

a detecting unit for detecting a certain operating state of the device;

a designating unit for designating, based on the certain operating state, selectable reference commands from the reference commands, wherein the selectable reference commands can be selected in the certain operating state; and

a speech recognizing unit for recognizing the speech as one of the selectable reference commands.

2. The voice control system according to Claim 1,

wherein the speech recognition data are stored in the storing unit with being divided into a plurality of voice data portions based on the operating states of the device, wherein a certain voice data portion includes the selectable reference commands that can be selected in the certain operating state, and

wherein the designating unit designates the selectable reference commands by selecting the certain voice data portion based on the certain operating state.

3. The voice control system according to Claim 1,

wherein the designating unit assigns, based on the certain operating state, one of a first code and a second code to the reference commands, wherein the first code is assigned to a reference command that is able to be selected in the certain operating state while the second code is assigned to a reference command that is unable to be selected in the certain operating state, and

wherein the designating unit designates the selectable reference commands by selecting the reference command having the first code.

4. The voice control system according to Claim 1,

wherein, when the certain operating state is a first operating state where the device is being turned on, the selectable reference commands do not include a reference command that controls the device for being tuned on, but the selectable reference commands include a reference command that controls the device for being turned off, and

wherein, when the certain operating state is a second operating state where the device is being turned off, the selectable reference commands do not include a reference command that controls the device for being tuned off, but the selectable reference commands include a reference command that controls the device for being turned on.

5. The voice control system according to Claim 1,

wherein, when the certain operating state is a first operating state where a function of the device is functioning, the selectable reference commands do not include a reference command that controls the function of the device for functioning, but the selectable reference commands include a reference command that controls the function of the device for ceasing, and

wherein, when the certain operating state is a second operating state where a function of the device is ceasing, the selectable reference commands do not include a reference command that controls the function of the device for ceasing, but the selectable reference commands include a reference command that controls the function of the device for functioning.

6. The voice control system according to Claim 1,

wherein the certain operating state is an operating state where a function of the device is functioning,

wherein the function of the device functions in multiple steps, and each of a given group of reference commands controls the function of the device for moving into one of the multiple steps, and

wherein the given group of reference commands are included in the selectable reference commands that can be selected in the certain operating state.

7. A voice control system that recognizes a speech uttered by a user to thereby control a device that has a plurality of operating states, comprising:

a storing unit for storing speech recognition data including a plurality of reference commands;

a speech recognizing unit for recognizing the speech as a recognized reference command included in the reference commands stored in the storing unit;

a detecting unit for detecting a certain operating state the device; and

a substituting unit for determining whether each of the reference commands is a selectable reference command that can be selected in the certain operating state, and for substituting, when the recognized reference command is determined to be not the selectable reference command, one of the selectable reference commands for the recognized reference command.

8. The voice control system according to Claim 7,

wherein the recognizing unit computes concordance rate between the speech and each of the reference commands, and selects, as the recognized reference command, a highest concordant reference command that has a highest concordance rate among the reference commands, and

wherein, when the recognized reference command is determined to be not the selectable reference command, the substituting unit substitutes, for the recognized reference command, a given reference command that is one of the selectable

reference commands and has a highest concordance rate among the selectable reference commands.

9. The voice control system according to Claim 7,

wherein the substituting unit includes a list including mis-recognizable reference commands that are apt to be mis-recognized with respect to each of the reference commands, and

wherein, when the recognized reference command is determined to be not the selectable command, the substituting unit determines, with referring to the list with respect to the recognized reference command, one of the mis-recognizable reference command that is to be substituted.

10. The voice control system according to Claim 7,

wherein, when the recognized reference command is one of a reciprocal pair of two reference commands that are for working oppositely to each other and the recognized reference command is determined to be not the selectable reference command, the substituting unit substitutes the other of the reciprocal pair for the recognized reference command.

11. The voice control system according to Claim 10,

wherein the reciprocal pair include an enabling reference command and a disabling reference command, and

wherein the enabling reference command is for enabling one of that the device is running and that a function of the device is functioning, while the disabling reference command is

for disabling one of that the device is running and that the function of the device is functioning.

12. The voice control system according to Claim 10,
wherein the certain operating state of the device is an operating state where a function of the device is functioning,
wherein the function of the device functions in multiple steps,

wherein each of the reciprocal pair controls the function of the device for moving into one of the multiple steps, and

wherein, even when the recognized reference command is one of the reciprocal pair and is determined to be not the selectable reference command, the substituting unit does not substitute the other of the reciprocal pair for the recognized reference command.

13. The voice control system according to Claim 12,
further comprising:

a notifying unit for notifying that the recognized reference command cannot be executed.

14. A method of a voice control system that recognizes a speech uttered by a user to thereby control a device that has a plurality of operating states, the method comprising steps of:

storing speech recognition data including a plurality of reference commands;

detecting a certain operating state of the device;

designating, based on the certain operating state, selectable reference commands from the reference commands, wherein the selectable reference commands can be selected in the certain operating state; and

recognizing the speech as one of the selectable reference commands.

15. A method of a voice control system that recognizes a speech uttered by a user to thereby control a device that has a plurality of operating states, the method comprising steps of:

storing speech recognition data including a plurality of reference commands;

recognizing the speech as a recognized reference command included in the reference commands;

detecting a certain operating state of the device;

determining whether each of the reference commands is a selectable reference command that can be selected in the certain operating state; and

substituting one of the selectable reference commands for the recognized reference command, when the recognized reference command is determined to be not the selectable reference command.